

Air Quality Permitting

Statement of Basis

March 22, 2006

Tier I Operating Permit No. T1-030035 Williams Gas Pipeline, Northwest Pipeline Corp. Mountain Home

Facility Identification No. 039-00022

Prepared by:

Michael Stambulis, Technical I Engineer
Division of Technical Services

PUBLIC COMMENT

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Acronyms, Units, and Chemical Nomenclature

acfm actual cubic feet per minute
AFS AIRS Facility Subsystem

AIRS Aerometric Information Retrieval System

AQCR Air Quality Control Region

Btu British thermal unit

CAM Compliance Assurance Monitoring

CFR Code of Federal Regulations

CO carbon monoxide

DEQ Department of Environmental Quality
EPA U.S. Environmental Protection Agency

FIRE Factor Information Retrieval HAPs hazardous air pollutants

hp horsepower

IDAPA A numbering designation for all administrative rules in Idaho promulgated in accordance

with the Idaho Administrative Procedures Act

km kilometer

MACT Maximum Achievable Control Technology

MMBtu million British thermal units

NESHAP National Emission Standards for Hazardous Air Pollutants

NO_x nitrogen oxides

NSPS New Source Performance Standards NWP Northwest Pipeline Corporation

PM particulate matter

PM₁₀ particulate matter with an aerodynamic diameter less than or equal to a nominal 10

micrometers

PSD Prevention of Significant Deterioration
SIC Standard Industrial Classification

 SO_2 sulfur dioxide TAPs toxic air pollutants T/yr tons per year

VOC Volatile Organic Compound

Public Comment / Affected States / EPA Review Summary

A 30-day public comment period for the Williams Gas Pipeline, Northwest Pipeline Corp.(NWP) draft Tier I operating permit will be held as required by IDAPA 58.01.01.364, Rules for the Control of Air Pollution in Idaho.

IDAPA 58.01.01.008.01 defines affected states as: "All states: whose air quality may be affected by the emissions of the Tier I source and that are contiguous to Idaho; or that are within 50 miles of the Tier I source."

A review of the site location information included in the permit application indicates that the facility is not located within 50 miles of a state border.

1. PURPOSE

The purpose of this memorandum is to explain the legal and factual basis for this draft Tier I operating permit in accordance with IDAPA 58.01.01.362.

The Department of Environmental Quality (DEQ) has reviewed the information provided by Williams Gas Pipeline, Northwest Pipeline (NWP) regarding the operation of the Compressor Station located near Mountain Home. This information was submitted based on the requirements to submit a Tier I operating permit application in accordance with IDAPA 58.01.01.313.

2. FACILITY DESCRIPTION

The Mountain Home Compressor Station operates remotely from NWP's headquarters, located in Salt Lake City, and is used to transmit natural gas along their natural gas transmission pipeline. The station is operated to meet the demand of the pipeline system rather than a fixed schedule. The arrangement of pipes and valves in the Mountain Home pipe yard allows natural gas to be transmitted in either direction.

Natural gas entering the station passes through an in-line filter that removes impurities from the gas stream. The natural gas is compressed through compressors and is returned to the transmission pipeline. Three reciprocating internal-combustion engines, which the permittee refers to as Unit 1, Unit 2, and Unit 3, drive the compressors. Fuel for the reciprocating engines and other natural gas combustion equipment originates in the pipe yard downstream of the filter. Fuel gas is lowered from pipeline pressures to pressure appropriate for the fuel burning equipment in the fuel meter building. From the fuel meter building, fuel gas is conveyed to the reciprocating engines, boiler, heaters, and the backup generator. The reciprocating engines, hot water heater, and backup generator have their own exhaust stacks.

3. FACILITY/AREA CLASSIFICATION

This facility emits or has the potential to emit a regulated criteria air pollutant in amounts greater than or equal to 100 tons per year; therefore, it is a major facility as defined by IDAPA 58.01.01.008.10. This facility is not considered major for hazardous air pollutants (HAPs) emissions because the facility does not emit or have the potential to emit a single HAP in amounts greater than 10 T/yr or a combination of HAPs in amounts greater than 25 T/yr.

The facility is a major facility as defined by IDAPA 58.01.01.205 because the facility emits or has the potential to emit a regulated criteria air pollutant in amounts greater than or equal to 250 T/yr.

This facility is not a designated facility as defined by IDAPA 58.01.01.006.27.

The Standard Industrial Code (SIC) defining this facility is 4922, and the Aerometric Information Retrieval System (AIRS) facility classification is A. Details of the AIRS facility-wide classification are in Appendix A.

The facility is located in Elmore County, which is located in Air Quality Control Region (AQCR) No. 63. This area is unclassifiable for all federal and state criteria pollutants. There are no Class I areas within 10 km of the facility.

4. APPLICATION SCOPE

On June 25, 2003, DEQ received an application from NWP for the renewal of their Tier I Operating Permit for the operation of their Mountain Home natural gas compressor station. The permittee did not request any changes to their permit in their June 2003 application.

On May 13, 2004, DEQ received a letter from NWP as a supplement to the June 2003 application. The permittee requested the following changes to their Tier I Operating Permit:

- 1. The permittee requested Permit Condition 2.2 of Tier I Operating Permit No. T1-020058, March 6, 2003, be amended to require the permittee to record total annual fuel usage for each engine rather than record monthly fuel usage for each engine.
- 2. The permittee requested Permit Condition 2.5 of Tier I Operating Permit No. T1-020058, March 6, 2003, be deleted.

The permit changes that have been requested by NWP are discussed in more detail in the Regulatory Analysis section of this memorandum.

5. SUMMARY OF EVENTS

On June 25, 2003, DEQ received an application for the renewal NWP's Tier I operating permit. On August 6, 2003, DEQ determined the application to be complete. On May 13, 2004, DEQ received a letter from NWP as a supplement to the June 2003 application.

Permitting History

| January 3, 2001 | DEQ issued Tier I Operating Permit No. 039-00022 to NWP for their Mountain Home facility. |
|-----------------|--|
| March 6, 2003 | DEQ issued Tier I Operating Permit No. T1-020058. The permit was an administrative permit amendment to the January 2001 operating permit and |
| | reflected a change of responsible official to Gordon Hamilton. |

6. PERMIT ANALYSIS

Basis of the Analysis

The following documents were relied upon in preparing this memorandum and the Tier I operating permit:

- Compliance certification received on January 12, 2004;
- Tier I operating permit application, received June 25, 2003;
- Tier I Operating Permit No. T1-020058, issued March 6, 2003;
- A performance test report for emissions tests conducted on October 1, 2001;
- A performance test report for emissions tests conducted on April 4, 2000;

- Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, January 1995, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency (EPA);
- Factor Information Retrieval (FIRE 6.23) Data System, a database management system containing EPA's recommended emission estimation factors for criteria and hazardous air pollutants; and
- Guidance developed by the EPA and DEQ.

Emissions Description

The primary emissions from the Mountain Home Compressor Station are from natural gas combustion in the three reciprocating engines which drive the compressors. The criteria pollutants of concern are carbon monoxide (CO), nitrogen oxides (NO_{x)}, and volatile organic compounds (VOCs). Natural gas combustion at this facility also results in organic compound emissions, some of which are hazardous/toxic air pollutants (HAPs/TAPs). DEQ does not expect the facility's emissions have changed compared to the previous permit term. Appendix B contains tables of estimated emissions expected from the reciprocating engines. The emissions factors used to estimate emissions are from the EPA program FIRE (SCC 20200253, for 4-cycle rich burn engines) and from performance tests conducted on Units 1 and 3. The emissions estimates are used as a worst case scenario to check for rule applicability.

7. REGULATORY ANALYSIS

Facility-Wide Applicable Requirements

7.1 IDAPA 58.01.01.313.03 – Renewals of Tier I Operating Permits

This rule provides the regulatory time limits within which the owner or operator of a Tier I source is required to submit a complete Tier I operating permit application.

7.2 Fuel Burning Equipment Grain-Loading Standards – IDAPA 58.01.01.677

The definition of fuel-burning equipment given in IDAPA 58.01.01.006.41 is "Any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer." Internal-combustion reciprocating engines do not fit this definition; therefore, the reciprocating engines at the facility are not subject to the grain-loading standards for fuel-burning equipment.

7.3 PSD – IDAPA 58.01.01.205

This facility emits or has the potential to emit a regulated criteria air pollutant (NOx) in amounts greater than 250 T/yr, the applicable PSD trigger. However, PSD permitting requirements have not been triggered because the facility was constructed (1956) prior to the effective date of the PSD permitting program (1977), no new major stationary sources have been constructed at the existing facility, and no major modifications have occurred at the existing facility.

7.4 NSPS – 40 CFR 60, IDAPA 58.01.01.590

There are no New Source Performance Standards (NSPS) that apply to the Mountain Home Compressor Station.

Standards of Performance for Storage Vessels for Petroleum Liquids (40 CFR 60 Subpart K, Ka) and Standards of Performance for Volatile Organic Liquid (Including Petroleum) Storage Vessels apply to vessels with volumes greater than $40~\text{m}^3$, and do not apply to this facility. The permit application indicates all storage vessels at the facility used to store volatile organic liquids have a capacity less than or equal to $40~\text{m}^3$.

Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants (40 CFR 60 Subpart KKK) does not apply to the Mountain Home Compressor Station because natural gas is not processed at this station.

Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions (40 CFR 60 Subpart LLL) does not apply to the Mountain Home Compressor Station because natural gas is not processed there.

7.5 NESHAP and MACT – 40 CFR Parts 61 and 63, IDAPA 58.01.01.591

There are no currently promulgated National Emissions Standards for Hazardous Air Pollutants (NESHAP) or Maximum Achievable Control Technology (MACT) rules that apply to this facility, because the facility does not emit or have the potential to emit a single HAP in amounts greater than 10 T/yr or a combination of HAPs in amounts greater than 25 T/yr.

7.6 CAM – 40 CFR Part 64, IDAPA 58.01.01.107.3(k)

Compliance Assurance Monitoring (CAM) does not apply to this facility, because a control device is not used to achieve compliance with any emission limitations or standards. In accordance with 40 CFR §64.1, the use of low-polluting fuel is not defined as a control device.

8. REGULATORY ANALYSIS – EMISSIONS UNITS

Ingersoll-Rand Reciprocating Engines

8.1 Reciprocating Engines Description

The natural gas compressors are powered by three Ingersoll Rand model 412-KVS reciprocating engines. The engines are sources of particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), sulfur dioxide (SO₂), CO, NO_x, VOC, and some HAPs/TAPs. The engines are rated at a maximum of 1,885 hp at station conditions, and were installed when the station was constructed in 1956. Exact parameters can be found in Table 1.1 of the permit. The stack parameters are listed below.

Stack Parameters

Ground Elevation: 3,170 ft
Stack Height: 25 ft
Exit diameter: 1.5 ft
Exit Gas Flowrate: 13,000 a

Exit Gas Flowrate: 13,000 acfm Exit Temperature: 720 °F

8.2 Removed Permit Conditions

None of the following permit conditions from the Tier I Operating Permit No T1-020058, March 6, 2003, that were removed from the renewed permit were applicable requirements as defined by IDAPA 58.01.01.008.03.

Permit Conditions 2.1 and 2.5, Tier I Operating Permit No. T1-020058, March 6, 2003

The previous permit classified the reciprocating engines as fuel-burning equipment, making them subject to the grain-loading standard in IDAPA 58.01.01.677. This requirement, Permit Condition 2.1, has been dropped from the renewed permit. DEQ asserts reciprocating engines do not fit the definition of fuel-burning equipment in IDAPA 58.01.01.006.41. Fuel-burning equipment serves the primary purpose of producing heat or power by indirect heat transfer. The definition of fuel-burning equipment specifically excludes internal combustion engines because internal combustion engines do not produce heat or power through indirect heat transfer. An internal combustion engine produces mechanical power directly through the expansion of combustion gases. Internal combustion engines include reciprocating engines and combustion turbines.

Permit Condition 2.5 required the permittee to conduct periodic performance tests to determine compliance with the grain-loading standard. As stated above, the grain-loading standard does not apply to internal combustion engines. Therefore, DEQ removed Permit Condition 2.5 from the renewed permit.

8.3 Permit Condition 2.2, Permit No. T1-020058, March 6, 2003

The permittee requested Permit Condition 2.2 of Tier I Operating Permit No. T1-020058, March 6, 2003, be amended to require the permittee to record total annual fuel usage for each engine rather than record monthly fuel usage for each engine. The fuel usage data is used to calculate annual emissions for fee purposes; therefore, only annual fuel usage data is required. DEQ amended the permit condition as requested by the permittee, and the amended permit condition is now Permit Condition 3.4 in the renewed permit.

8.4 Permit Requirement 4.1 – Fuel Type

Permit Condition 4.1 has been added to the renewed permit to allow the permittee to burn only natural gas in stationary source combustion units at the Mountain Home Compressor Station. This permit condition will assure compliance with the visible emissions requirement of Permit Condition 2.7.

9. INSIGNIFICANT ACTIVITIES

There are several insignificant sources at the Mountain Home Compressor Station, described in the permit application. These emission units qualify as insignificant due to the quantity of emissions or to the source being specifically listed in IDAPA 58.01.01.317.01(a/b). Emission units that are listed as insignificant under IDAPA 58.01.01.317.01(b) are listed in the Tier I OP in order to be covered by the permit shield, defined in IDAPA 58.01.01.325.01, while the emission units determined insignificant under IDAPA 58.01.01.317.01(a) are not listed in the Tier I OP. While there are no monitoring requirements for insignificant emissions units at this facility, these units must comply with all applicable federal, state, and local requirements.

Table 9.1 INSIGNIFICANT ACTIVITIES DESCRIBED BY THE SOURCE IN ACCORDANCE WITH IDAPA 58.01.01.317.

| Emission Unit Description | Insignificant Activities IDAPA Citation Section 317.01. |
|--|---|
| Boiler, 3.6 MMBtu/hr ¹ | b.i.5 |
| Back-up Air Compressor, 15 horsepower | b.i.5 |
| Back-up Generator, 300 hp | b.i.5 |
| Space Heaters, < 0.5 MMBtu/hr | b.i.18 |
| Used Oil Heater, with own stack | b.i.18 |
| Lubricating Oil System, 277 barrel storage tank open to atmosphere | a.i.4 |

¹MMBtu/hr: million British thermal units per hour

The lubricating oil system emits small amounts of VOCs. The natural gas pipeline and fuel system emits VOCs and some HAPs and TAPs. These emissions result from leaking valves, flanges, pressure relief valves, and an annual testing of the emergency shutdown system that includes a facility-wide blowdown. All other insignificant activities generate emissions as products of natural gas combustion, which include PM₁₀, SO₂, CO, NO₃, VOCs, and some HAPs and TAPs.

10. ALTERNATIVE OPERATING SCENARIOS

There are no alternative operating scenarios requested by the facility.

11. TRADING SCENARIOS

There are no trading scenarios requested by the facility.

12. COMPLIANCE SCHEDULE

12.1 Compliance Plan

NWP has submitted a compliance plan indicating that all emission units are in compliance and will continue to comply with the terms and conditions in accordance with IDAPA 58.01.01.314.10. In addition, if there are additional terms or conditions applicable to the source, NWP has stated that it will meet the terms and conditions on a timely basis as required by DEQ.

12.2 Compliance Certification

NWP is required to certify compliance each year for the period of January 1 to December 31, in accordance with General Provision 21. The facility shall submit an annual compliance certification report for each emissions unit to DEQ and EPA within 30 days of the end of the specified reporting period, in accordance with IDAPA 58.01.01.314.10. The compliance certification report shall address compliance of each emissions unit to the terms and conditions of this permit, including fuel usage, visible emissions, and fugitive emissions.

13. SEMI-ANNUAL REPORT

The permittee is required to semi-annually submit reports of any required monitoring and instances of deviations for the periods of January 1 to June 30 and July 1 to December 31 of each year. The reports are to be sent to DEQ within 30 days of the reporting period.

14. ACID RAIN PERMIT

NWP is not subject to the Acid Rain permitting requirements of 40 CFR §72-75. The facility is not an affected unit according to the definitions and applicability under §72.2 and §72.6. The engines at the Mountain Home Compressor Station are non-utility units as defined by 40 CFR §72.6(b.8).

15. REGISTRATION FEES

This facility is a major facility as defined by IDAPA 58.01.01.008.10; therefore, registration and registration fees in accordance with IDAPA 58.01.01.387 apply.

16. RECOMMENDATION

Based on the Tier I application and review of state rules and federal regulations, staff recommends that DEQ provide draft Tier I operating Permit No. T1-030035 for public comment as required by IDAPA 58.01.01.364.

MS/bf

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APPENDIX A

Williams Gas Pipeline, Northwest Pipeline Corp. Mountain Home Compressor Station

T1-030035

AIRS TABLE

AIRS DATABASE

AIRS/AFS FACILITY-WIDE CLASSIFICATION DATA ENTRY FORM

| AIR PROGRAM | SIP | PSD | NSPS (Part 60) | NESHAP (Part 61) | | TITLEV | AREA CLASSIFICATION |
|-------------------|-----|------|-------------------|---------------------|-------------------|--------|---|
| POLLUTANT | | | | | MACT (Part 63) | | A – Attainment U – Unclassifiable N – Nonattainment |
| SO ₂ | В | | | | | | U |
| NO_x | A | A | | | | A | U |
| CO | A | | | | | A | U |
| PM 10 | В | | | | | | U |
| PT (Particulate) | В | | | | | | U |
| VOC | В | | | | | | U |
| THAP (Total HAPs) | В | | | | | | U |
| | | APPL | ICABLE SUB | PART | | | |
| | | | | | | | |

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).
- $NA \ = \ Not \ applicable \ as \ defined \ in \ IDAPA \ 58.01.01.579, \ constructed \ prior \ to \ baseline \ dates.$

APPENDIX B

WILLIAMS GAS PIPELINE, NORTHWEST PIPELINE CORP. MOUNTAIN HOME COMPRESSOR STATION

T1-030035

EMISSIONS ESTIMATES

Criteria Pollutant Potential Emissions Estimates

Table B-1. Unit 1 Emissions

| Pollutant | Emission Factor (lb/MMBtu) ¹ | Control Efficiency | Maximum Potential Emissions (pounds per hour) ² | Maximum Potential Emissions (tons per year) ³ | Reference |
|--------------------|---|-----------------------|--|--|-----------|
| Particulate Matter | 1.94E-02 | 0% | 3.28E-01 | 1.4 | 1 |
| PM_{10}^{4} | 1.94E-02 | 0% | 3.28E-01 | 1.4 | 1 |
| Sulfur dioxide | 5.88E-04 | 0% | 9.94E-03 | 0.04 | 1 |
| Carbon monoxide | 7.72E-01 | 0% | 1.30E+01 | 57.1 | 2 |
| Nitrogen oxides | 4.77E+00 | 0% | 8.06E+01 | 353.1 | 3 |
| VOC ⁵ | 2.96E-02 | 0% | 5.00E-01 | 2.2 | 1 |
| Lead | 0.00E+00 | 0% | 0 | 0 | 1 |

¹Pounds per million British thermal units heat input.

Table B-2. Unit 2 Emissions

| Tuble D 2. Chie 2 Emissions | | | | | | | |
|-----------------------------|---|-----------------------|--|--|-----------|--|--|
| Pollutant | Emission Factor (lb/MMBtu) ¹ | Control Efficiency | Maximum Potential Emissions (pounds per hour) ² | Maximum Potential Emissions (tons per year) ³ | Reference | | |
| Particulate Matter | 1.94E-02 | 0% | 3.28E-01 | 1.4 | 1 | | |
| PM_{10}^{4} | 1.94E-02 | 0% | 3.28E-01 | 1.4 | 1 | | |
| Sulfur dioxide | 5.88E-04 | 0% | 9.94E-03 | 0.04 | 1 | | |
| Carbon monoxide | 7.72E-01 | 0% | 1.30E+01 | 57.1 | 2 | | |
| Nitrogen oxides | 4.77E+00 | 0% | 8.06E+01 | 353.1 | 3 | | |
| VOC ⁵ | 2.96E-02 | 0% | 5.00E-01 | 2.2 | 1 | | |
| Lead | 0.00E+00 | 0% | 0 | 0 | 1 | | |

Pounds per million British thermal units heat input.

Table B-3. Unit 3 Emissions

| Pollutant | Emission Factor (lb/MMBtu) ¹ | Control Efficiency | Maximum Potential Emissions (pounds per hour) ² | Maximum Potential Emissions (tons per year) ³ | Reference |
|--------------------|---|-----------------------|--|--|-----------|
| Particulate Matter | 5.86E-03 | 0% | 9.91E-02 | 0.43 | 4 |
| PM_{10}^{4} | 5.86E-03 | 0% | 9.91E-02 | 0.43 | 4 |
| Sulfur dioxide | 5.88E-04 | 0% | 9.94E-03 | 0.04 | 1 |
| Carbon monoxide | 7.72E-01 | 0% | 1.30E+01 | 57.1 | 2 |
| Nitrogen oxides | 3.59E+00 | 0% | 6.07E+01 | 265.7 | 4 |
| VOC ⁵ | 2.96E-02 | 0% | 5.00E-01 | 2.2 | 1 |
| Lead | 0.00E+00 | 0% | 0 | 0 | 1 |

¹Pounds per million British thermal units heat input.

²Maximum potential hourly emissions based on maximum heat input of 16.9 million British thermal units per hour.

³Maximum potential annual emissions based on 8,760 hours of operation per year.

⁴Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

⁵Volatile organic compounds.

²Maximum potential hourly emissions based on maximum heat input of 16.9 million British thermal units per hour.

³Maximum potential annual emissions based on 8,760 hours of operation per year.

⁴Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

⁵Volatile organic compounds.

²Maximum potential hourly emissions based on maximum heat input of 16.9 million British thermal units per hour.

³Maximum potential annual emissions based on 8,760 hours of operation per year.

⁴Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

⁵Volatile organic compounds.

Table B-4. Facility Wide Criteria Pollutant Potential Emissions

| Pollutant | Maximum Potential Emissions (tons per year) ¹ | | |
|--------------------|--|--|--|
| Particulate Matter | 3.2 | | |
| PM_{10}^{2} | 3.2 | | |
| Sulfur dioxide | 0.1 | | |
| Carbon monoxide | 171.3 | | |
| Nitrogen oxides | 971.9 | | |
| VOC ³ | 6.6 | | |
| Lead | 0 | | |

Maximum potential annual emissions based on 8,760 hours of operation per year.

Hazardous Air Pollutant Potential Emissions Estimates

Table B-5. Facility Wide Criteria Pollutant Potential Emissions

| Pollutant | Emission Factor (lb/MMBtu) ¹ | Control Efficiency | Maximum Potential Emissions (pounds per hour) ² | Maximum Potential Emissions (tons per year) ³ | Reference | | | |
|--|---|-----------------------|--|--|-----------|--|--|--|
| 1,1,2,2-Tetrachloroethylene | 2.53E-05 | 0% | 4.28E-04 | 5.62E-03 | 1 | | | |
| 1,1,2-Trichloroethane | 1.53E-05 | 0% | 2.59E-04 | 3.40E-03 | 1 | | | |
| 1,3-Butadiene | 6.63E-04 | 0% | 1.12E-02 | 1.47E-01 | 1 | | | |
| 1,1-Dichloroethane | 1.13E-05 | 0% | 1.91E-04 | 2.51E-03 | 1 | | | |
| 1,2-Dichloroethane | 1.13E-05 | 0% | 1.91E-04 | 2.51E-03 | 1 | | | |
| 1,3-Dichlorpropene | 1.27E-05 | 0% | 2.15E-04 | 2.82E-03 | 1 | | | |
| Acetaldehyde | 2.79E-03 | 0% | 4.72E-02 | 6.20E-01 | 1 | | | |
| Acrolein | 2.63E-03 | 0% | 4.44E-02 | 5.84E-01 | 1 | | | |
| Benzene | 1.58E-03 | 0% | 2.67E-02 | 3.51E-01 | 1 | | | |
| Carbon tetrachloride | 1.77E-05 | 0% | 2.99E-04 | 3.93E-03 | 1 | | | |
| Chlorobenzene | 1.29E-05 | 0% | 2.18E-04 | 2.86E-03 | 1 | | | |
| Chloroform | 1.37E-05 | 0% | 2.32E-04 | 3.04E-03 | 1 | | | |
| Ethylbenzene | 2.48E-05 | 0% | 4.19E-04 | 5.51E-03 | 1 | | | |
| Ethylene dibromide | 2.13E-05 | 0% | 3.60E-04 | 4.73E-03 | 1 | | | |
| Formaldehyde | 2.05E-02 | 0% | 3.46E-01 | 4.55E+00 | 1 | | | |
| Methyl alcohol | 3.06E-03 | 0% | 5.17E-02 | 6.80E-01 | 1 | | | |
| Methylene chloride | 4.12E-05 | 0% | 6.96E-04 | 9.15E-03 | 1 | | | |
| Napthalene | 9.71E-05 | 0% | 1.64E-03 | 2.16E-02 | 1 | | | |
| Propylene dichloride | 1.30E-05 | 0% | 2.20E-04 | 2.89E-03 | 1 | | | |
| Styrene | 1.19E-05 | 0% | 2.01E-04 | 2.64E-03 | 1 | | | |
| Toluene | 5.58E-04 | 0% | 9.43E-03 | 1.24E-01 | 1 | | | |
| Vinyl chloride | 7.18E-06 | 0% | 1.21E-04 | 1.59E-03 | 1 | | | |
| Xylene | 1.95E-04 | 0% | 3.30E-03 | 4.33E-02 | 1 | | | |
| Total Potential Annual Hazardous Air Pollutant Emissions 7.2 | | | | | | | | |

¹Pounds per million British thermal units heat input.

References

- 1. Table 3.2-3, United States Environmental Protection Agency, AP 42, Fifth Edition, *Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Area Sources*.
- 2. April 4, 2000, performance test conducted on Unit 1 at low load.
- 3. April 4, 2000, performance test conducted on Unit 1 at high load.
- 4. October 1, 2001, performance test conducted on Unit 3 at high load.

²Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

³Volatile organic compounds.

²Maximum potential hourly emissions based on maximum heat input of 16.9 million British thermal units per hour. Emissions represent potential emissions from one internal-combustion unit.

³Maximum potential annual emissions based on 8,760 hours of operation per year. Emissions represent potential emissions from all three internal-combustion units at facility.